

APPENDIX A

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EXPERIENCE

2004-

Scram Technologies Inc. / Combat Displays, Inc.**Chief Technology Officer and Vice President and Director of Engineering**

Led a team of engineers that designed, developed, fabricated and delivered to NAVAIR in 12 months a new avionics display for the F-18 aircraft featuring an LED illuminator and DMD microdisplay technology. Four engineering units were developed and qualified for flight testing. This is the first LED illuminated microdisplay to be used for an avionics application. Key to the design was a unique LED illumination system for which five patent applications were filed.

Developed a thin (10 inches deep) 52 inch rear projection TV (RPTV) with no chin for consumer TV applications. The RPTV features a novel (proprietary) optical design and utilizes Scram's unique ambient light rejecting screen technology. Played pivotal role in directing Chinese optical and electronics companies who provided key components for this project. Key person in negotiating with Samsung and SVA (Shanghai Audio and Video) the transition of the slim line RPTV into realizable consumer products for their TV lines.

Designed, developed and demonstrated the feasibility of a new LED/DLP mini-projector for consumer application. Currently working with China DaHeng to transition this product to manufacturing. The projector was introduced at Consumer Electronics Show in January 2008.

Responsible for the Scram Screen manufacturing facility in Rockland, Mass. Ambient light rejecting screens are manufactured in the facility for consumer RPTV, military and commercial projection applications. The facility is capable of producing 10,000 screens per month. Implemented process to increase screen yields and associated R&D activities for improved performance. Scram screens are used at two NFL stadiums, network broadcast newsrooms in Washington, D.C. as well as several sports bars around the country. Key person in negotiations with Fuji for transferring consumer screen manufacturing to their facility in South Carolina.

Engaged in negotiations with several Chinese companies for key component production. Companies include Honnic, Daheng, Jiaguang Optical and Delta (Taiwan electronics company).

2002-04

Bose Corporation**Chief Engineer**

Developed business plan for Bose to enter the high definition TV (HDTV) Home Theater market. The plan included the development of a family of HDTV products (both front and rear projection TV), marketing, sales and channel strategy, financial models, and strategic partner relationships. Engaged two potential customers (one in the US and one in China) representing substantial sales to test the HDTV system.

Entered into two strategic co-development agreements with Asian (Japanese and Chinese) companies for the development of liquid crystal on silicon (LCOS) projection

devices. One of the relationships resulted in achieving the best performance for any LCOS projection system on the market.

Performed research and development on LCOS projection systems which resulted in one issued patent and two pending patent applications involving illumination systems and color combining techniques.

Invited speaker at the Projection Summit Conference (part of InfoComm) in Atlanta, GA on June 7–8, 2004.

1996-02

Polaroid Corporation

Divisional Vice President, LCD Projector Systems

Managed \$38M business, which included sales, marketing, engineering and production as well as sourcing LCD projectors. Worldwide profit and loss responsibility for all aspects of business. Was able to grow business from \$9M to \$38M over three years by establishing new sales and marketing channels in the US, Europe and Asia, and reduced manufacturing expenses by moving manufacturing to low cost Chinese suppliers. Extensive international business experience in both Asia and Europe. Initiated successful design and production of a new innovative projector using LCOS technology. Licensed LCOS technology to Everest Company of Taiwan. First company in partnership with nView to introduce DLP® front projection system to the market. DLP® revenues of \$18M were achieved over 6 months.

Divisional Vice President, Commercial Optics Business Unit

Called in on special assignment to lead the Polaroid Commercial Optics Division which included optical design and engineering, metrology, and manufacturing because of my business, technical and manufacturing knowledge of the optics industry. The goal was to develop external business, and to develop a business plan for divesting the entire unit and using the funds to pay down Polaroid's debt. In a six month period, \$8M of new business was developed with digital camera manufacturers (SMA and Premier) and potential new business of \$30M was identified. The business unit was successfully divested to HT Capital.

Divisional Vice President, Global Hardware Development

Managed Global Hardware Operations, which included three design centers located in the US, Scotland and China. Responsible for worldwide design of all products including optics, electro-optic and electronic devices for Polaroid, which included instant cameras, digital cameras, film recorders, scanners, digital printers, LCD projectors and specialized optical and imaging equipment for photo retailing and identification systems. These products were sold in both consumer and commercial markets.

1991-96

McDonnell Douglas Electronic Systems Company

Director of Engineering, Lasers and Electronics Systems Company (L&ES).

Responsibilities included managing and growing an engineering organization, maintaining technical excellence in the core competencies, ensuring proper engineering balance between four business units, managing and accountable for the division's engineering overhead rates, conducting advanced technology research and development for future products, and developing an aggressive plan to acquire related CRAD (contract research and development) that will leverage IRAD (internal research and development) investments.

L&ES was comprised of four business and engineering units, Avionics and Ground Support Equipment, Space Lasers and Electronics Systems, Laser Systems, and Visual Flight Simulation Systems with total sales of \$500M. Accomplishments include:

- **Key member** of management team reporting to General Manager and Vice President of L&ES. The team was charged with the financial, business, and personnel management of the company.
- Established matrix engineering organization across the L&ES four businesses with a \$34M dollar budget.
- Successfully implemented Integrated Product Development Teams employing concurrent engineering to take new products from design into manufacturing.
- Developed and implemented value added and cost reduction practices to improve the engineering design process. Reduced engineering overhead by \$4M and design times by four weeks.
- Successfully delivered on cost and schedule the Clementine Laser Altimeter, which achieved outstanding performance mapping the lunar surface.
- Established Advanced Technology R&D Group to focus on future product development.
- Won two major space laser programs worth \$3M dollars: Mars Observer Laser Altimeter II (MOLA II) and Near Earth Asteroid Rendezvous (NEAR).
- Developed semiconductor business relationship with institutes and industries in Russia which resulted in a Department of Defense (DoD) funded program worth \$10M to transfer electron beam technology to the U.S.
- Initiated several new technologies and have obtained \$20M of DOD funding for diode pumped solid state lasers, semiconductor lasers and optoelectronic integrated circuits.
- Formulated 1992 and 1993 IRAD programs worth \$14.2M dollars to support business needs. Currently managing IRAD technical and financial activities.

1985 - 1990 **General Electric Astro-Space Division**

1987 - 1990 **Manager, Electro-Optics Engineering.** Manager of an engineering section involved in designing, fabrication, integration and testing of passive and active electro-optic sensors for space applications. Responsibilities included managing the activities of engineers, providing leadership to establish E-O as part of Astro's core business, initiating new IRAD programs, obtaining CRAD funding, and providing a strong base for E-O technologies to be used on the next generation spacecraft.

Key management achievements included successful proposal and program management for LAWS - Phase I; GLRS; SODR; D2 - Hypervelocity Missile; PILOT III, IV, V; DMSP VI Optical Sensors; and Lasercom Weight Reduction. Successfully delivered brassboard for classified program. Initiated fiber-optic program for replacing copper cabling on present spacecraft - effort resulted in fiber-optics becoming the baseline for TDRSS II.

1985 - 1987 **Manager, Electro-Optics Laboratory.** Management, supervision and technical direction of engineers performing R&D of E-O systems for strategic applications. Major duties included: staffing, designing and facilitating laboratories, planning, securing DoD contract funding, customer interfacing, initiating and managing IRAD programs, and supporting internal GE E-O requirements.

The lab performed R&D on IR focal plane arrays, IR LIDAR/LADARS, FLIRS, hardening of IR focal planes, laser diode array technology (AlGaAs), laser diode pumping of Nd:YAG, and binary optics.

1979 - 1985

Honeywell Electro-Optics Division

Group Leader and Research Engineering Supervisor. Performed research and development of infrared quantum detectors utilizing the variable bandgap semiconductor HgCdTe for IR thermal imaging and carbon dioxide laser radar applications. Research included device design, fabrication, testing, analysis, and modeling.

EDUCATION

Clarkson University, Potsdam, N.Y.
B.S., PHYSICS
University of Massachusetts, Amherst, MA
M.S., PHYSICS
University of Massachusetts, Amherst, MA
Ph.D. Electrical Engineering

PUBLICATIONS

Over 55 publications in the areas of semiconductor device physics, millimeter/microwaves, radio astronomy, interstellar molecular astrophysics, and laser and electro-optic systems.

PATENTS

Six patents and ten patent applications pending in the areas of semiconductor lasers, LCOS projectors, LED projectors, color combining mechanisms and video systems and electronics.

PROFESSIONAL ACHIEVEMENTS

AIAA - CHAIRMAN - TECHNICAL COMMITTEE SENSOR SYSTEMS - 1991- 1993

SPIE - CONFERENCE CHAIR - SURVEILLANCE TECHNOLOGIES II,
OE/AEROSPACE SENSING AND SCIENCE, ORLANDO, FLORIDA, APRIL, 1992

SPIE - CONFERENCE CHAIR - SURVEILLANCE TECHNOLOGIES III,
OE/AEROSPACE SENSING AND SCIENCE, ORLANDO, FLORIDA, APRIL, 1993

SPIE - CONFERENCE CHAIR - FREE-SPACE LASER COMMUNICATIONS V,
OE/LASE '93, LOS ANGELES, CALIFORNIA, JANUARY 1993

SPIE - CONFERENCE CHAIR - COMMERCIALIZATION OF AEROSPACE
TECHNOLOGY, SAN DIEGO, CALIFORNIA, JULY 1993

NATIONAL SOCIETY FOR SENSOR FUSION - COMMITTEE MEMBER, 1989 - 1996

IRIS DETECTOR SPECIALTY GROUP - SESSION CHAIR - IR HETERODYNE
RECEIVERS, 1989

HONEYWELL TECHNICAL ACHIEVEMENT AWARD FOR RESEARCH AND
DEVELOPMENT OF IR HETERODYNE RECEIVERS, 1984

POLAROID PRESIDENTS EXCELLENCE AWARD FOR BUSINESS AND TECHNICAL
ACCOMPLISHMENTS AND FOR GROWING LCD PROJECTOR BUSINESS, 1999

MANAGEMENT TRAINING

HONEYWELL MANAGEMENT DEVELOPMENT PROGRAM - 1983

GE MANAGEMENT TRAINING - CROTONVILLE

NEW MANAGER DEVELOPMENT - 1986

MANAGER DEVELOPMENT - 1987

EXPERIENCED MANAGER DEVELOPMENT - 1988

BUSINESS MANAGER DEVELOPMENT - 1989

GENERAL MANAGER DEVELOPMENT - 1990

PROFESSIONAL SOCIETIES

American Physical Society

Institute of Electrical and Electronics Engineers

American Institute of Aeronautics and Astronautics

The International Society for Optical Engineers

Society for Photo Optical Instrumentation Engineers

Executive Committee Member Center for Innovation and Product Development – MIT

Honorary Member the Hong Kong Optical Manufacturers Association